



REMARKS

The application is believed to be in condition for allowance for the reasons set forth below.

Claims 1-9 are pending in the application.

Claims 1-9 were rejected under 35 USC §112, second paragraph, as being indefinite. That rejection is respectfully traversed.

The position set forth in the Official Action is that the recited "the length L_{BC} of the boundary line between the composite material layer (B) and the porous layer (C) is in the range of 1.2 mm to 2.5 mm" is unclear and a similar recitation with respect to the boundary line between composite material layer (D) and porous layer (C) is also unclear, since the structure of the boundary lines is indefinite and because the special orientation of the boundary lines is unclear.

MPEP §2173.02 sets forth guidelines for determining whether the claims are in compliance with 35 USC 112, second paragraph. This section provides:

"The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made."

In the present case, the disclosure details how to determine the boundaries. For claim 1, page 6, lines 11-15 disclose three layers (A), (B), and (C) as seen in cross-section in Figure 5, for example. As disclosed on page 16, lines 1-26 of the application as filed, a line is drawn by connecting the terminals of the layer (A). This line is referred to as terminal line X. Thus, line X extends through layer (A) comprising the non-porous material alone.

As further disclosed, a line starting from the terminal line X and crossing the terminal line X at a right angle is drawn toward the layer (C). This line is referred to as right-angled line Y. A second line is drawn connecting the points crossing the right-angled line at a distance equivalent to the thickness of the sheet-like material (i.e. the thickness of the non-welded portion of the sheet-like material. See page 16, lines 11-14) towards layer (C) side from the terminal line. This second line is referred to as base line Z.

Lines Y divide the sample into plural sections (a-f) each having a length of 0.4 mm as set forth on page 9, lines 3-12 between terminal line X and base line Z. Each section is measured using, for example, a curvimeter or image processing unit along the "coastline" as disclosed on page 15, lines 20-21. The maximum value of each section is regarded as L_{BC} . The same analysis is used to determine the length L_{DC} of the boundary line between composite material layer (D) and porous layer (C).

As the length of the boundaries L_{BC} and L_{DC} as defined by the claims are consistent with what was originally disclosed, and could be readily determine by one of ordinary skill in the art based on the content of the disclosure, the claims are believed to meet the threshold requirements of clarity and precision. Accordingly, withdrawal of the rejection under 35 USC §112, second paragraph, is respectfully requested.

Claims 1-9 were rejected as unpatentable over LYNN et al. U.S. Publication No. 2002/0148764. That rejection is respectfully traversed.

Independent claims 1 and 2 recite that a welded portion has a cross-section comprising at least three layers containing a layer (A) comprising the non-porous material alone, a composite material layer (B) containing the non-porous material and porous material in admixture, and a layer (C) comprising the porous material alone.

By way of example, Figure 5 of the present invention, reproduced below shows a cross-section comprising layer (A) comprising the non-porous material alone (whitish-gray area at middle of figure between lines X and Z), a composite material layer (B) containing the non-porous material and porous material in admixture (whitish gray and darker gray also between lines X and Z), and a layer (C) comprising the porous material alone (darker gray at bottom of figure - beneath line Z). Thus, there are three distinct layers (A), (B), and (C).

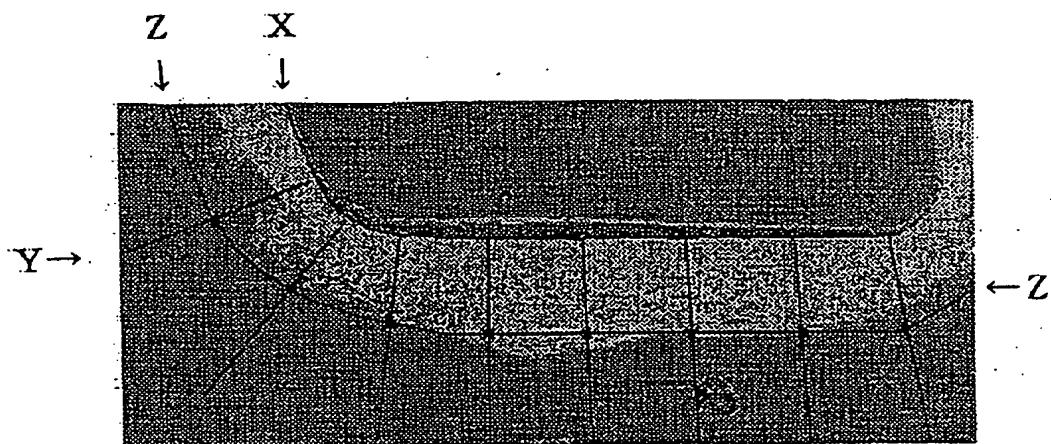


FIG. 5

Paragraphs [0036], [0040] and [0041] of LYNN describe a unitary, continuous seal 36. The seal 36 integrates the material of the filtration medium 28 and the material of the plastic sheets 32, 34. These materials form a commingled melted matrix having a structure in which the sheet material and filter material are both melted and intermingled with respect to one another.

LYNN does not disclose that a welded portion has a cross-section comprising at least three layers containing a layer (A) comprising the non-porous material alone, a composite material layer (B) containing the non-porous material and porous material in admixture, and a layer (C) comprising the porous material alone.

Rather, as set forth above, the materials of LYNN are intermingled as a unitary structure at the seal. As LYNN does

not disclose each of the limitations of the present invention, *prima facie* obviousness has not been established.

Moreover, the position set forth in the Official Action that the length of the boundary line would have been obvious to one of ordinary skill in the art based on routine experimentation to arrive at an optimum thickness is not supported by the disclosure of LYNN.

Since LYNN has a unitary structure, the weld of LYNN does not have a boundary. Accordingly, LYNN could not recognize the relation between the boundary line length and resistance to delamination. Thus, based on the disclosure of LYNN, one of ordinary skill in the art would not recognize the boundary line length as a result-effective variable that might be optimized through routine experimentation. Accordingly, the recited boundary line length of between 1.2 mm to 2.5 mm would not have been obvious in view of LYNN.

In view of the above, it is apparent that the recited structure distinguishes over LYNN and the recited boundary line length would not have been obvious in view of LYNN. Accordingly, claims 1-9 are believed patentable over LYNN.

In view of the foregoing remarks, it is believed that the present application is in condition for allowance. Reconsideration and allowance are respectfully requested.

The Examiner is respectfully requested to contact the below attorney to arrange an interview to discuss this case if

the Examiner deems the foregoing remarks do not place the application in condition for allowance.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Liam McDowell, Reg. No. 44,231
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

LM/lk